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	First Named Inventor	Ernst Reder	
	Art Unit	1723	
	Examiner Name	Benjamin M. Kurtz	
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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Ernst Reder et al.

Examiner: Benjamin M. Kurtz

Serial No: 10/520,733

Group Art Unit: 1723

Filed: January 10, 2005

Date: June 10, 2008

For: **FILTER CARTRIDGE**

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**BRIEF FOR APPELLANT**

Appellant has appealed the Final Rejection of January 23, 2008. Please consider this Appeal Brief filed in accordance with 37 CFR § 41.37.

**REAL PARTY IN INTEREST**

By virtue of an Assignment dated December 21, 2004, by the named inventors, the real party in interest is BRITA GmbH, having a business address of Heinrich-Hertz-Strasse 4, Taunusstein, Germany 65232. The Assignment has been recorded in the U.S. Patent and Trademark Office on January 10, 2005 at Reel 017193 and Frame 0215.

**RELATED APPEALS AND INTERFERENCES**

There are no other appeals or interferences known to the Appellant which will affect or have bearing on the Board's decision concerning this appeal.

**STATUS OF CLAIMS**

Claims 1-10 and 13-26 are pending in the application. Claims 1-10, 13-19, 21, 25 and 26 have been rejected. Claims 20, 23 and 24 have been allowed. Claim 22 has been objected to, but would be allowable if rewritten in independent form and to include all the limitations of the base claim and any intervening claims. Rejected claims 1-10, 13-19, 21, 25 and 26 are being appealed.

## **STATUS OF AMENDMENTS**

Appellant's Amendment "F" filed March 18, 2008 subsequent to the Final Rejection of January 23, 2008 was noted in the Advisory Action mailed April 7, 2008. However, the Examiner did not indicate whether or not the noted amendment was entered.

## **SUMMARY OF CLAIMED SUBJECT MATTER**

Independent claim 1 claims a filter cartridge 1, see Fig. 1, with a filter material comprising a cartridge container with a bottom wall 2 and a peripheral wall 3 and a lid 10 which durably shuts the cartridge container, see page 1, lines 3-6. The lid is comprised of a lid bottom and a strip-shaped lateral wall, see page 1, line 5 and Figs. 1, 2a, 2b and 3 wherein reference number 11 designates lid bottom and reference number 16 indicates the lateral wall. The lateral wall has a length measured parallel to the peripheral wall, see page 9, lines 9-10, and a linear vertical cross-section as shown in at least Figs. 2a, 2b and 4 along the entire length of the lateral wall, with a form matching according to its border, see also page 14, lines 6-7. The lateral wall is fitted at the inner side of the peripheral wall, see page 14, lines 7-8, and Figs. 1, 2a, 2b, 3 and 4. The lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section 14, see page 4, lines 1-4, page 8, line 14, and Figs. 1, 2a, 2b, 3 and 4. The curved edge section and the lateral wall join in a common wall section 15, tapering inwards, in a forming region, see page 4, lines 3-4, and Figs. 1, 2a, 2b, 3 and 4. A lower end 18 of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, see page 4, lines 5-12 and Figs. 1, 2a, 2b and 4. The lateral wall has an upper wall section 17, see page 9, lines 1-10, and Figs. 2a, 2b and 4 which is connected to and extends upward from the common wall section that is parallel to the common wall section lower end and the cartridge container peripheral wall adjacent thereto, see page 7, lines 11-18, page 9, lines 8-10, and Figs. 2a, 2b and 4.

Independent claim 25 claims a filter cartridge 1, see Fig. 1, with a filter material comprising a cartridge container with a bottom wall 2 and a peripheral wall 3 and a lid 10 which durably shuts the cartridge container, see page 1, lines 3-6. The lid is comprised of a lid bottom and a strip-shaped lateral wall, see page 1, line 5 and Figs. 1,

2a, 2b and 3 wherein reference number 11 designates lid bottom and reference number 16 indicates the lateral wall. The lateral wall has a length measured parallel to the peripheral wall, see page 9, lines 9-10, and a linear vertical cross-section as shown in at least Figs. 2a, 2b and 4 along the entire length of the lateral wall, with a form matching according to its border, see also page 14, lines 6-7. The lateral wall is fitted at the inner side of the peripheral wall, see page 14, lines 7-8, and Figs. 1, 2a, 2b, 3 and 4. The lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section 14, see page 4, lines 1-4, page 8, line 14, and Figs. 1, 2a, 2b, 3 and 4. The curved edge section and the lateral wall join in a common wall section 15, tapering inwards, in a forming region, see page 4, lines 3-4, and Figs. 1, 2a, 2b, 3 and 4. A lower end 18 of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, see page 4, lines 5-12 and Figs. 1, 2a, 2b and 4. The lateral wall has an upper wall section 17, see page 9, lines 1-10, and Figs. 2a, 2b and 4 which is connected to and extends upward from the common wall section that is parallel to the common wall section lower end and the cartridge container peripheral wall adjacent thereto, see page 7, lines 11-18, page 9, lines 8-10, and Figs. 2a, 2b and 4. In the vertical cross-section, the lateral wall is a linear tangent line, see page 5, lines 1-4 and FIGS. 2a, 2b and 4. The lateral wall is connected to the curved edge section tangentially, see page 5, lines 1-7 and Figs. 2a, 2b and 4.

Independent claim 26 claims a filter cartridge 1, see Fig. 1, with a filter material comprising a cartridge container with a bottom wall 2 and a peripheral wall 3 and a lid 10 which durably shuts the cartridge container, see page 1, lines 3-6. The lid is comprised of a lid bottom and a strip-shaped lateral wall, see page 1, line 5 and Figs. 1, 2a, 2b and 3 wherein reference number 11 designates lid bottom and reference number 16 indicates the lateral wall. The lateral wall has a length measured parallel to the peripheral wall, see page 9, lines 9-10, and a linear vertical cross-section as shown in at least Figs. 2a, 2b and 4 along the entire length of the lateral wall, with a form matching according to its border, see also page 14, lines 6-7. The lateral wall is fitted at the inner side of the peripheral wall, see page 14, lines 7-8, and Figs. 1, 2a, 2b, 3 and 4. The lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section 14, see page 4, lines 1-4, page 8, line 14, and Figs. 1, 2a,

2b, 3 and 4. The curved edge section and the lateral wall join in a common wall section 15, tapering inwards, in a forming region, see page 4, lines 3-4, and Figs. 1, 2a, 2b, 3 and 4. A lower end 18 of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, see page 4, lines 5-12 and Figs. 1, 2a, 2b and 4. The lateral wall has an upper wall section 17, see page 9, lines 1-10, and Figs. 2a, 2b and 4 which is connected to and extends upward from the common wall section that is parallel to the common wall section lower end and the cartridge container peripheral wall adjacent thereto, see page 7, lines 11-18, page 9, lines 8-10, and Figs. 2a, 2b and 4. The curved edge section has a mean edge radius of curvature  $R$ , which satisfies  $R \geq 5 \times S$ , wherein  $S$  indicates the thickness of the peripheral wall of the cartridge container, see page 5, lines 8-12, page 9, lines 11-15 and FIGS. 2a and 2b.

#### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

At issue is whether claims 1-4, 6-8, 13, 14, 16, 18 and 25 are unpatentable according to 35 U.S.C. § 102(b) or, in the alternative, 35 U.S.C. § 103(a) over Greer, U.S. Patent No. 3,627,612.

Further at issue is whether claims 5, 17 and 26 are unpatentable according to 35 U.S.C. §103(a) over Greer, U.S. Patent No. 3,627,612.

Additionally at issue is whether claim 15 is unpatentable according to 35 U.S.C. §103(a) over Greer, U.S. Patent No. 3,627,612, in view of Gizowski et al., U.S. Publication No. 2001/0000894.

Also at issue is whether claims 9, 10, 19 and 21 are unpatentable according to 35 U.S.C. §103(a) over Greer in view of Stifano, U.S. Patent No. 4,109,820.

Also at issue is whether claims 1-8, 13, 14, 16, 18, 25 and 26 are unpatentable according to 35 U.S.C. §103(a) over Schlensker et al., WO 02/38247 (U.S. Patent No. 6,936,084 for English translation).

Further at issue is whether claim 15 is unpatentable according to 35 U.S.C. §103(a) over Schlensker '247 in view of Gizowski et al., U.S. Publication No. 2001/0000894.

Finally at issue is whether claims 9, 10, 19 and 21 are unpatentable according to 35 U.S.C. §103(a) over Schlensker '247 in view of Stifano, U.S. Patent No. 4,109,820.

## **ARGUMENT**

### **Arguments Relating to 35 U.S.C. §102(b) and §103(a) Rejections in View of Greer, U.S. Patent No. 3,627,612**

#### **Claim 1**

It is respectfully submitted that the cited Greer reference, U.S. Patent No. 3,627,612 (hereinafter "Greer") cannot anticipate nor render obvious the present invention as claimed and the Examiner has not presented either a prima facie case of anticipation or obviousness with respect to claim 1, or the claims dependent therefrom. There is no recognition in Greer of a problem encountered in the discovery of the present invention which involved providing a filter cartridge, in particular for water, including filter material that has a design that is stable under the action of pressure which acts upon the cartridge and cartridge lid in the course of operation of the filter device that can lead to leakages in the long term, wherein the solution is provided by Appellant's claimed filter cartridge of specifically claimed arrangement which provides a distribution of forces so that the leakages are effectively prevented and the service life of the filter cartridge is limited mainly due to the consumption of the filter material therein. The Greer reference lacks numerous specifically claimed structural features of Appellant's claimed filter cartridge with filter material and there is no suggestion to modify the Greer reference. Moreover, when considered as a whole, the Greer reference has a scope and content that teaches away from the claimed invention.

As stated by the Federal Circuit, "Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration," see *W.L. Gore & Associates v. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). It is not enough, however, that the prior art reference disclose all the claimed elements in isolation. Rather, as stated by the Federal Circuit, "anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed, arranged as in the claim", see *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984). The Federal Circuit has indicated that "in deciding the issue of anticipation, the trier of fact must identify the elements of the claims, determine their meaning in light of the specification and prosecution history, and identify corresponding elements disclosed in the allegedly

anticipating reference", see *Id.*, 221 USPQ at 485. Further, "under 35 U.S.C. §102, anticipation requires that . . . the prior art reference must be enabling, thus placing the allegedly disclosed matter in the possession of the public", see *Akzo N.V. v. United States Int'l Trade Commission*, 808 F.2d 1471, 1 USPQ2d 1241, 1245 (Fed. Cir. 1986). The Federal Circuit has added that the anticipation determination is viewed from one of ordinary skill in the art: "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention", see *Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991).

Regarding the alternative obviousness-type rejection, as discussed in *KSR International Co. v. Teleflex Inc.*, 550 U.S.\_\_\_\_ (2007), the Court in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), set out a framework for applying the statutory language of 35 U.S.C. Section 103(a). The analysis is objective and includes (a) determining the scope and content of the prior art, (b) ascertaining the differences between the prior art and the claims at issue, (c) resolving the level of ordinary skill in the pertinent art, and (d) evaluating evidence of secondary considerations. Against this background, according to the scope and content of the Greer reference, it is respectfully submitted that there can be neither anticipation nor obviousness of independent claim 1. In view of the differences between Greer and the claim at issue, as described hereinbelow, the Examiner has not identified an explicit reason that would have prompted a person of ordinary skill in the art to modify the Greer reference to arrive at the claimed invention.

First, independent claim 1 claims a filter cartridge with a filter material. To the contrary, Greer teaches, as described in the Abstract, a pressure vessel using a deformable bladder. Therefore, Greer does not disclose either a filter cartridge or filter material. Greer teaches a device which does not operate on the same principle and, therefore, cannot anticipate the claimed filter cartridge with a filter material. Regarding obviousness, the gap between the teachings of the Greer reference and the claimed invention is so great as to render the claim non-obvious to one reasonable skilled in the art. It is unclear what a person of ordinary skill in the art would have known or could

have done in order to form a filter cartridge in view of the scope and content presented within Greer.

Moreover, independent claim 1 claims a cartridge container with a lid, which shuts the container and is comprised of a lid bottom and "a strip-shaped lateral wall having a length measured parallel to the peripheral wall (of the container) and having a linear vertical cross section along the entire length of the lateral wall." To summarize, Appellant claims a straight lateral wall in vertical cross section, see for example, lateral wall 16 in Fig. 2a.

In the final Office Action on page 2, the Examiner states that the Greer lateral wall is considered to be solely portion 26 excluding portions 27 and 28. The Examiner further states in the Advisory Action that the element 26 of Greer is a strip-shaped lateral wall with a linear cross section along its entire length as defined by the claim and the lateral wall 26 of Greer has a further section 27 and 28 attached to it but the element 26 itself, is a strip-shaped lateral wall as claimed.

It is respectfully submitted that the Examiner cannot simply ignore sections 27 and 28 of the Greer lid wall! As clearly illustrated in FIG. 1 of Greer, Greer cover member 21 includes a lateral wall including sections 26, 27 and 28, with sections 27 and 28 part of the cover member and also part of the lateral wall as defined within Appellant's specification. Accordingly, by ignoring sections 27 and 28, the Examiner has not considered the entire length of the lateral wall as specifically claimed in independent claim 1.

Cover member sections 26, 27 and 28 of Greer are continuous and joined.

A prima facie case of obviousness requires some reason, suggestion, or motivation from the prior art as a whole for the person of ordinary skill in the art to have combined or modified the references. As stated by the Federal Circuit:

"It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that "[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention." *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780, 1784



(Fed. Cir. 1992) (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988)).

Cutting against the finding of motivation to modify the prior art is when the scope and content of the prior art teaches away from the claimed limitation. One of ordinary skill in the art upon reading the Greer reference would be led in a direction divergent from the path that the Applicants took. Greer teaches a lid having a lateral wall which is clearly not linear in cross section along its length and there is no motivation to modify the reference otherwise. In fact, as explained further hereinbelow, the structure of the Greer lateral wall is to retain a portion of a bladder between the lateral wall and the container outer wall.

Moreover, section 2141.02 of the MPEP states that ascertaining the differences between the prior art and the claims at issue requires interpreting the claim language, and considering both the invention and the prior art references as a whole (emphasis added). Furthermore, the last portion of the noted section includes the heading “prior art must be considered in its entirety, including disclosures that teach away from the claims”. The Federal Circuit has further stated: A prior art reference must be considered in its entirety, i.e. as a whole, including portions would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

In *In re Wesslau*, the Court of Customs and Patent Appeals cautioned that “it is impermissible within ...to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” 353 F.2d at 241, 147 USPQ at 393. In *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 230 USPQ 416 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987), on remand, 10 USPQ 2d 1929 (N.D. Calif. 1989), the Federal Circuit held that a single line in a prior art reference should not be taken out of context and relied upon with the benefit of hindsight to show obviousness.

Accordingly, it is respectfully submitted that the Examiner cannot merely consider wall 26 as being the claimed “entire length of the lateral wall” when clearly portions 27 and 28 are a part of and also form the lateral wall of the Greer lid along with portion 26.

To do so would ignore the scope and content of the Greer reference and introduce impermissible hindsight reasoning.

Independent claim 1 also claims that the lateral wall is fitted at the inner side of the peripheral wall of the cartridge container. The Examiner states in the Advisory Action that "Given the broadest reasonable interpretation being fitted at the inner side of the peripheral wall would be at least in proximity to the inner side of the peripheral wall and the lateral wall of Greer is located in proximity to the inner side of the peripheral wall." However, Appellant's independent claim 1 language clearly states the lateral wall is fitted at the inner side of the peripheral wall and not "at least in the proximity." In Appellant's Figures, lateral wall 16 is fitted at the inner side of the peripheral wall. To the contrary, as shown in FIG. 1 of Greer, bladder 31 includes a thickened rim 32 which is interposed between sleeve 26 of the outer lateral wall of the Greer cover member 21 and the peripheral wall of the container 12. Therefore, Greer cannot anticipate Appellant's claimed limitation. Greer includes a scope and content that teaches securing a portion of bladder 31 between the container wall and a portion of the cover member lateral wall. Greer does teach that the lateral wall is fitted at the inner side of the peripheral wall.

Independent claim 1 claims that the lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section. Curved edge section 14 is illustrated clearly in Figs. 2a and 2b and is described on at least page 8, lines 14-15 and on page 9, line 1-4, wherein it is stated that curved edge section 14 extends into the interior of the filter cartridge and joins its vertical section 15' with the lateral wall 16 in the common wall section 15.

As illustrated in FIG. 1 of Greer, and in the enlarged view set forth in FIG. 2 of Greer, Greer includes lid bottom 22 curves toward wall section 26, is abruptly ended, extended inwardly towards the center of the container before reversing outwardly 180 degrees at periphery 25 and then merges outwardly with lateral wall 26 at a U-shaped edge. Accordingly, there is no anticipation of Appellant's claimed merging of the lid bottom with the lateral wall along the claimed inward curved edge section. It is unclear what a person in possession of the Greer reference would have been reasonably expected to have been able to do in view of the scope presented therein.

Independent claim 1 further claims that the curved edge section and the lateral wall join in a common wall section tapering inwards in a forming region. Fig. 2a shows common wall section 15 tapering inward to a pointed tip, see also first full paragraph of page 9. In the Advisory Action, the Examiner states that "The common wall section tapers at the U-shaped bottom portion at the extremity of elements 22 and 26 as shown in figures 1 and 2 of Greer." However, the Examiner has not shown that the curved edge section and lateral wall join in a common wall section as claimed. At most, the joining can take place at periphery 25, directly below the line that delineates sections 26 and 22 of Greer. Such a location cannot teach the claimed common wall section tapering inwards in a forming region as claimed.

Independent claim 1 further claims that the lower end of the common wall is parallel to the cartridge container peripheral wall adjacent thereto. Lower lateral wall section 18 is illustrated in at least Fig. 2a. In the Advisory Action, the Examiner states that "the common wall section where elements 22 and 26 touch is parallel with the container wall and is adjacent thereto," with adjacent being defined as not distant, nearby.

However, as indicated above, Greer does not teach a common wall section. Moreover, as illustrated in FIG. 1, the lower end of the Greer periphery 25 is not adjacent the peripheral wall, but instead adjacent rim 32 of bladder 31.

Furthermore, independent claim 1 claims that the lateral wall has an upper wall section, see reference number 17 in Fig. 1, for example, which is connected to and extends upwardly from the common wall section that is parallel to the common wall section lower end and the cartridge container peripheral wall adjacent thereto. This claim feature stresses the lineality of the lateral wall and conformance to the container peripheral wall. The Examiner again states that lateral wall consists of section 26 and is parallel to the common wall section and cartridge container and utilizes the broadest reasonable definition of adjacent as defined by the Examiner.

Again, it is respectfully submitted that the Examiner has not considered the teachings of the Greer reference as a whole as the lateral wall of Greer according to the definitions provided in Appellant's specification would include sections 26, 27 and 28 and not merely section 26.

In summary, in view of the numerous structural differences defined in independent claim 1, there can be no anticipation of the claimed filter cartridge with a filter material. As to the scope and content of Greer, there is no recognition in Greer of the problem encountered in the present invention which involves the need for a filter cartridge with a filter material wherein the service life of the filter cartridge is prolonged with a durably fastened lid. In view of the differences between the Greer reference and the claim at issue, the Examiner has not identified an explicit reason that would have prompted a person of ordinary skill in the art to modify the Greer reference to arrive at the claimed invention.

### **Arguments Relating to Claims 2 and 25**

Dependent claim 2 and independent claim 25 claim that in vertical cross section the lateral wall is a linear tangent line and wherein the lateral wall is connected with the curved edge section tangentially. Geometrically, a linear surface or line is tangent to a curve at some point, if both the line or surface in the curve pass through the same point with the same direction. These claim features are clearly shown in at least Fig. 2a and Fig. 4, wherein the lateral wall 16 is linear and curved edge section 14 connects with the curved end section tangentially.

The Examiner merely states that the Greer lateral wall is a linear tangent line and the lateral wall is connected with the curved edge section tangentially. In the Advisory Action, the Examiner adds that "As shown most clearly in figure 2 of Greer where the curved edge section and the lateral wall connect, the lateral wall is tangent to the curved edge." The Examiner's statement is, respectfully, incorrect. First, when considered as a whole, the Greer lateral wall includes sections 26, 27 and 28 which are not a linear tangent line as claimed in claims 2 and 25. Moreover, curved edge section 22 does not connect with the lateral wall tangentially, but instead transitions into the lateral wall portion 26 at a rounded periphery 25. Greer FIG. 1 shows a clear vertical line of separation between lid bottom 22 and lateral wall section 26 which remains unbroken until reaching periphery 25. Even if one would impermissibly pick and choose lateral wall section 26 to represent the sole lateral wall section, there is no tangential connection as section 26 and curved edge 22 do not pass through the same point with

the same direction as required by the definition of a tangent! Extending curved edge section 22, the same would pass through lateral wall 26 as the curvature of the curved edge section 22 is too shallow.

Considering the scope and content of the Greer reference, it is unclear what a person of ordinary skill in the art would have known or could have done when provided with the Greer reference, as Greer does not teach a lateral wall having a linear tangent line, nor does the lateral wall connect with the curved edge section tangentially as specifically claimed. As described on page 5, lines 1-4, the inward oriented force component of the tensile force, which acts on the lateral wall and on the peripheral wall, is reduced further due to the tangential orientation.

#### **Arguments Relating to Claims 3 and 16**

Claims 3 and 16 claim that the common wall section forms a lower wall section of the lateral wall that includes the lower end. This feature is clearly illustrated in Fig. 2a. As indicated hereinabove, the independent claim states that the curved edge section and the lateral wall join in a common wall section, tapering inwards, in a forming region. Greer cannot anticipate nor teach or suggest the same as curved edge section 22 and wall section 26 meet at periphery 25 as indicated in Col. 2, lines 6-7, wherein central portion 22 is reversely bent to define a mounting sleeve 26. This arrangement cannot teach Appellant's inward tapering common wall section which forms a lower wall section of the lateral wall that includes the lower end as claimed.

#### **Arguments Relating to Claim 4**

Claim 4 indicates the curved edge section extends up to the inner end of the strip-shaped lateral wall. As clearly illustrated in FIGS. 1 and 2 of Greer, curved edge section 22 ends at a vertical wall section which extends downwardly into periphery 25. Therefore, Greer cannot anticipate nor render obvious the claimed limitation.

#### **Arguments Relating to Claim 6**

Regarding claim 6, the Examiner merely states "the curved edge section spans an angle from 80 to 100 degrees (FIG. 1)."

It is respectfully submitted that this is incorrect. As illustrated in FIG. 1 of Greer, the curvature 22 of the lid bottom begins adjacent fitting 24 and ends wherein the curve transitions into the downwardly directed linear portion near periphery 25. The angle is only about 56°, which is clearly outside Appellant's claimed range.

#### **Arguments Relating to Claims 13 and 14**

Claims 13 and 14 state that a weld, as defined within each respective claim, connects at least one section of the common wall section to the peripheral wall. As indicated hereinabove, Greer lacks a common wall section containing both the curved edge section and the lateral wall. Moreover, no weld connects the common wall section to the peripheral wall 12 of the Greer container. In fact, the peripheral wall is separated from what the Examiner considers lateral wall 26 by the bladder.

#### **Arguments Relating to 35 U.S.C. §103(a) Rejection Based on Greer, U.S. Patent No. 3,627,612**

#### **Arguments Relating to Claims 5, 17 and 26**

The limitation at focus in the indicated claims is wherein the curved edge section has a mean edge radius of curvature  $R$ , which satisfies  $R \geq 5 \times S$ , wherein  $S$  indicates the thickness of the peripheral wall of the cartridge container.

Regarding claims 5, 17 and 26, the Examiner admits that "Greer teaches the cartridge but does not teach the claimed dimensional relationship of the curve of radius and the peripheral wall thickness." The Examiner then cites *Gardner v. Tec Systems, Inc.*, 220 USPQ 777 (1984) and states that "Absent some showing of secondary evidence that the claimed range for the curvature of radius substantially differentiates from the prior art, the claimed recitation is deemed a dimensional change." The Examiner further cites *Gardner* for the proposition that "Where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device."

It is respectfully submitted that the Examiner's reliance on *Gardner* is misplaced. With respect to claims 5 and 17 which ultimately depend on claim 1, numerous distinguishing features and differences have been pointed out in the above sections with regard to claim 1 arguments for patentability. Likewise, independent claim 26 contains many claim limitations that are also found in claim 1 and the arguments thereto are herein incorporated by reference. When considered as a whole, the Greer reference structure is much different than the claimed structure claimed in claims 5, 17 and 26. The Greer reference does not present any relative dimensions regarding the radius of curvature. By the Examiner's characterization of Greer, it is clear that there is no recognition of the importance of the radius of curvature in comparison to the curved peripheral wall thickness within the scope and content of the Greer reference. It is unclear from the teachings of the Greer reference how a person of ordinary skill would have understood the prior art Greer teachings or what a person of ordinary skill would have known or could have done in view of the teachings of the Greer reference to arrive at Appellant's claimed limitations and the radius of curvature of the claimed cartridge.

On page 5 of the pending application, it is stated that the Appellant found the greater the radius of curvature of the curved edge section, the more favorable is the force distribution, whereby the upper limit is given by the dimensions of the cartridge container. Thus, a filter cartridge having a radius of curvature as claimed, which cannot be solved by Greer, allows the forces acting on the lid due to the internal pressure to be weakened in the edge area, and can be used for generating a sealing force whereby due to the radius of curvature, the common wall section is pressed against the peripheral wall of the cartridge container, see page 4, third full paragraph. It is respectfully submitted that the gap between prior art and the claimed invention is so great as to render the claim non-obvious to one reasonably skilled in the art.

**Arguments Relating to 35 U.S.C. §103(a) Rejection Based on  
Greer in view of Gizowski et al., U.S. Publication No. 2001/0000894**

**Arguments Relating to Claim 15**

The Examiner indicates that Greer does not teach the material of the cartridge is transparent to laser light but that Gizowski teaches the material transparent to laser light

and at least the material of the lateral wall of the lid is absorptive to laser light (paragraph 3). In the Advisory Action, the Examiner states that "as taught by Gizowski the use of the laser welding enables increased manufacturing rates and provides a higher quality fluid seal which would be desirable over other connection methods, such as those taught in Greer."

The Examiner's Advisory Action comments are in response to Appellant's arguments that Greer teaches free edge 41 of the container reversely bent as at 42 over the upper edge 43 of sleeve 28 securely to retain cover member 21 in a fixed position. In view of the teachings of Greer, the cartridge container transparent to laser light would be unnecessary and neither taught or suggested and there would be no further need to bond the lid to the container. It is respectfully submitted that the Examiner is picking and choosing isolated features from the prior art and combining the same in order to attempt to arrive at the Appellant's invention. There is no scope or content within the prior art references that would have led one of ordinary skill in the art to modify the references to arrive at the claimed invention.

**Arguments Relating to 35 U.S.C. §103(a) Rejection Based on  
Greer in view of Stifano, U.S. Patent No. 4,109,820**

**Arguments Relating to Claims 9 and 19**

Claims 9 and 19 claim a back-up ring arranged on the lid, wherein the back-up ring has an inner wall comprising a ring opening, an outer lateral wall in contact with the lid lateral wall, and a plurality of radial reinforcing ribs connected to and extending between the inner all and the outer wall.

As indicated in the specification on at least page 6, second full paragraph, by providing a back-up ring, the cartridge lid can be designed with a thinner wall because pressure exerted on the inside of the cartridge lid is practically transmitted through the back-up ring to the lid of the outside container. Since the back-up ring is reusable, but the lid as well as the filter cartridge must be disposed of later as waste, costs for the lid material can thus be saved. Fig. 3 clearly shows back-up ring 20 arranged on the lid, with the back-up ring having ring opening 27 and outer lateral wall 26 with radial reinforcing ribs 21 connected to and extending therebetween.



The Examiner admits on page 6 of the final Office Action that Greer does not teach a back-up ring. It is respectfully submitted there is no motivation to utilize a back-up ring in conjunction with Greer. Greer teaches that the container outer peripheral wall 12 has a free edge 41 of the container that is reversely bent as at 42 over the upper edge 43 of sleeve 28 securely to retain cover member 21 in a fixed position, see Col. 3, lines 8-10. Accordingly, the scope and content of the Greer reference teaches away from any back-up ring which would be unnecessary in view of the closure arrangement provided by Greer.

Moreover, it is respectfully submitted that the Stifano reference cannot anticipate nor render obvious Appellant's claimed back-up ring. Stifano teaches a single lid and not a back-up ring arranged on a lid as claimed. Stifano teaches a lid or closure insert 10 comprising an inverted annular flange 13 and a plurality of support members 14 underlying annular flange 13 and all but the central portion of the face, see Col. 2, line 50 through Col. 3, line 2. It is further defined in Col. 3, lines 29-33, the plurality of support members 14 are preferably integrally formed with the face and flange. Accordingly, Stifano cannot anticipate nor teach or suggest Appellant's claimed back-up ring arranged on the lid as claimed in dependent claim 9.

Moreover, Appellant's claimed back-up ring, which is separate and distinct from the claimed lid, is claimed to have an inner wall comprising a ring opening and an outer lateral wall in contact with the lid lateral wall. Neither Greer nor Stifano teach any such structure. Moreover, dependent claim 9 claims that the plurality of radial reinforcing ribs are connected to and extend between the back-up ring inner wall and back-up ring outer lateral wall. As illustrated in FIG. 4, especially FIG. 5, the Stifano reinforcing ribs do not connect to and extend between both a back-up inner wall and a back-up ring outer wall, but instead extend from the Stifano lid outer wall 22 and end on the underside 21 of the lid, and do not all contact the ring opening 25. It is respectfully submitted that one of ordinary skill in the art would not arrive at the Appellant's invention even if in possession of the Greer and Stifano references.

As indicated hereinabove, the claimed back-up ring is reusable, but the lid as well as the filter cartridge must be disposed of after use. One of ordinary skill does not learn the teaching of a reusable back-up ring from the combination of Stifano and Greer.

### **Arguments Relating to Claim 10**

Claim 10 depends on claim 9 and claims that a bottom contour of the back-up ring, see for example 22, 23 and 24 in Fig. 3, is connected to the back-up ring inner wall and the back-up ring outer lateral wall, and is built such that the bottom contour is complementary to an outer contour of the lid.

As Greer lacks the back-up ring, there can be no teaching of the claimed bottom contour. The Examiner points to FIG. 6 of Stifano regarding Appellant's claimed feature. However, FIG. 6 relates to a container closed by a closure assembly. The Stifano lid has no back-up ring illustrated.

### **Arguments Relating to Claim 21**

Although Stifano and Greer include a connecting tube, the same do not include separate and distinct back-up rings having an opening through which the connecting tube is accessible.

### **Arguments Relating to 35 U.S.C. §103(a) Rejection Based on Schlensker et al, WO 02/38247 (U.S. 6,936,084 for English Translation)**

#### **Arguments Relating to Claim 1**

It is respectfully submitted that the Schlensker reference does not include a scope and content that can render independent claim 1 obvious and the Examiner has not presented a prima facie case of obviousness.

Claim 1 states that the lid includes a strip-shaped lateral wall having a linear vertical cross section along the entire length of the lateral wall. The limitation clearly indicates that the entire length of the lateral wall has a linear vertical cross section as illustrated, for example, in FIG. 2a which includes lateral wall 16. Schlensker's Fig. 1, see Exhibit A, includes a lateral wall 24, adjacent container peripheral wall 20, clearly does not have a linear vertical cross section along the entire length of the lateral wall. Schlensker teaches a stepped upper wall section shown in the bottom portion of Fig. 1 as well as an angled portion present in the common wall section located upward from the upper wall section shown in Fig. 1.

Claim 1 further states that the lateral wall upper wall section, see 17 in Fig. 2a, is connected to and extends upward from the common wall section 18 that is parallel to the common wall section lower end and the cartridge container peripheral wall adjacent thereto. The Schlensker upper wall section connected to and extending upwardly (downwardly in Fig. 1) from the common wall section clearly includes on its interior surface a stepped section which provides the upper wall section with a stepped appearance. Accordingly, the Schlensker upper wall section cannot be parallel to the common wall section lower end and is further not parallel to the cartridge container peripheral wall adjacent thereto.

Moreover, as indicated in the Advisory Action, the Examiner agrees that the lateral wall of Schlensker is not linear along its entire length, as it has small variations as part of the lateral wall, see page 4.

### **Arguments Relating to Claim 2**

With respect to Schlensker, the Examiner states that Schlensker further teaches the lateral walls connected with a curved edge section tangentially. In the Response to Arguments section of the Final Office Action, the Examiner further states "the Schlensker lid curves complete 90 degrees until it is parallel to the peripheral wall. At this point, the curved section is joined to the lateral wall and is a tangent line to the curve. Furthermore, comparing the Appellant's figures and the figure of Schlensker the same structure is present" (emphasis added). In the Advisory Action, the Examiner "agrees the lateral wall of Schlensker is not linear along its entire length, as it has small variations as part of the lateral wall." The Examiner further states "However, the lateral wall taken as a whole extends parallel to the peripheral wall and is considered to be parallel thereto despite its small variations." It is respectfully submitted that according to the Examiner's own comments, Schlensker cannot provide a scope and content that teaches the specific limitations set forth in claim 2.

Moreover, as indicated by the §103 rejection of claim 1 wherein the Examiner notes the differences between the Schlensker reference and Appellant's claimed invention, the same structure cannot be present. Considering the Schlensker reference as a whole, the scope and content thereof, along with the admission by the Examiner

that the lateral wall of Schlensker is not linear along its entire length, one of ordinary skill in the art would be led away from the claimed invention and Schlensker provides no motivation whatsoever for forming a tangential connection as claimed between the lateral wall and the curved edge section.

Regarding the Examiner's Advisory Action statement on page 4 that the same structure of the curved edge section joining the lateral wall as a tangent line is present in the prior art of Schlensker is not understood. Within the same paragraph, the Examiner agrees the lateral wall of Schlensker is not linear along its entire length. Moreover, the Examiner's quote from *Gardner* specifically states "Where the only difference between the prior art and the claims ... " Therefore, *Gardner* refers to the claims as a whole and not one individual element of the claims as alluded to by the Examiner.

#### **Arguments Relating to Claims 5 and 26**

Claim 5 and independent claim 26 claim that the curved edge section has the mean edge radius of curvature  $R$ , which satisfies the equation  $R$  greater than or equal to 5 times  $S$ , wherein  $S$  indicates the thickness of a peripheral wall of the cartridge container. The Examiner states that Schlensker does not teach the claimed dimensional relationship of the curve of radius and, therefore, rejects claim 5 under 35 U.S.C. § 103(a) as being obvious. It is respectfully submitted that the Examiner's reliance on *Gardner* is misplaced. The Examiner's quote states that "where the only difference between the prior art and the claims was a recitation of relative dimensions... the claimed device was not patentably distinct from the prior art device". As indicated above with respect to claim 1, Schlensker cannot anticipate at least the two mentioned additional limitations present within independent claim 1 upon which claim 5 depends, and also present in independent claim 26. Nor does Schlensker present any relative dimensions regarding the radius of curvature of his lid. As reiterated by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. \_\_\_\_ (2007), the basic inquiries regarding the question of obviousness set forth in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966), are determining the scope and content of the prior art, ascertaining the differences between the claimed invention and the prior art, and

resolving the level of ordinary skill in the pertinent art. By the Examiner's characterization of Schlensker, it is clear that there is no recognition of the importance of the radius of curvature in comparison to the curved peripheral wall thickness within the scope and content of the Schlensker reference. As claimed in claim 5 and independent claim 26, Appellant's claimed curved edge section has a radius of curvature  $R$  which satisfies the equation  $R$  greater than or equal to 5 times  $S$ , wherein  $S$  is the thickness of the peripheral wall of the cartridge container.

Considering Schlensker, please see the enlarged, partial marked-up copy of Fig. 1 of Schlensker labeled as Exhibit B. The radius of curvature  $R$  of the curved edge section is about 0.75 cm.  $S$ , the thickness of the peripheral wall of the cartridge container is about 0.45 cm at a minimum. According to Appellant's claimed relationship, the Schlensker radius of curvature  $R$ , 0.75, is not greater than or equal to 5 times  $S$ , which equals 2.25. It is unclear from the teachings of the Schlensker reference how a person of ordinary skill would have understood the prior art teachings or what a person of ordinary skill would have known or could have done in view of the teachings of the Schlensker reference to arrive at Appellant's claimed limitation regarding the radius of curvature.

As indicated on page 5 of the present application, it was also found that the greater the radius of curvature of the curved edge section, more favorable is the force distribution, whereby the upper limit is given by the dimensions of the cartridge container. Thus, having a greater radius of curvature, which cannot be taught or suggested by Schlensker, allows the forces acting on the lid due to the internal pressure cannot only be weakened in the edge area, but can be used for generating a sealing force whereby due to the radius of curvature, the common wall section is pressed against the peripheral wall of the cartridge container, see page 4, third full paragraph. It is respectfully submitted that the gap between the prior art and the claimed invention is so great as to render the claim non-obvious to one reasonably skilled in the art.

### **Arguments Relating to Claim 8**

Claim 8 specifies that the upper wall section of the lateral wall and the curved edge section border on their outer side forming a ring space with a wedge-shaped cross

section. FIG. 1 of Schlensker is not formed as a wedge, but includes a curved section and a stepped section. Appellant's ring space has a wedge-shaped cross section.

**Arguments Relating to 35 U.S.C. §103(a) Rejection Based on  
Schlensker '247 in view of Gizowski, U.S. 2001/0000894**

**Arguments Relating to Claim 15**

Claim 15 defines that the material of the cartridge container is transparent to laser light and at least the material of the lateral wall of the lid is absorptive to laser light.

The Examiner indicates that Schlensker does not teach the material of the cartridge is transparent to laser light but that Gizowski teaches the material transparent to laser light at least the material of the lateral wall of the lid is absorptive to laser light (paragraph 3).

It is respectfully submitted that the Examiner is picking and choosing isolated features from the prior art and combining the same in order to attempt to arrive at Appellant's invention. There is no scope or content within the prior art references that would have lead one of ordinary skill in the art to combine the references to arrive at the claimed invention.

**Arguments Relating to 35 U.S.C. §103(a) Rejection Based on  
Schlensker '247 in view of Stifano, U.S. 4,109,820**

**Arguments Relating to Claims 9 and 19**

Claims 9 and 19 are directed to the back-up ring arranged on the lid as described hereinabove. As indicated by the Examiner, Schlensker teaches a filter cartridge but does not teach a back-up ring. It is incorrect that the Examiner states that Stifano teaches a lid further comprising a back-up ring arranged on the lid. Stifano teaches a single lid and not a back-up ring arranged on a lid as claimed. Stifano teaches a lid or closure insert 10 comprising an inverted annular flange 13 and a plurality of support members 14 underlying annular flange 13 and all but the central portion of the face, see Col. 2, line 50 through Col. 3, line 2. It is further defined in Col. 3, lines 29-33, the plurality of support members 14 are preferably integrally formed with the face and flange.

In the Response to Arguments section of the final Office Action, the Examiner states that the back-up ring as taught by Stifano may be a separate distinct structure thereby fulfilling the claimed limitations (Col. 3, lines 31-33).

According to the passage cited by the Examiner, if the support member 14 were not integrally formed with the face and flange, the same would still not constitute a back-up ring as defined by Appellant's claims. Claims 9 and 19 specifically call for a back-up ring having an inner wall comprising a ring opening and an outer lateral wall in contact with the lid lateral wall, and a plurality of radial reinforcing ribs connected to and extending between the back-up ring inner wall and back-up ring outer wall. At most, the Stifano support members not integrally formed could teach Appellant's radial reinforcing ribs.

Moreover, dependent claim 9 claims that the plurality of radial reinforcing ribs are connected to and extend between the back-up ring inner wall and the back-up ring outer lateral wall. As illustrated in Fig. 4 and especially Fig. 5, the Stifano reinforcing ribs do not connect to and extend between both the back-up ring inner wall and back-up ring outer wall, but instead extend from the Stifano lid outer wall 22 and end on the underside 21 of the lid, and do not at all contact the ring opening 25. It is respectfully submitted that one of ordinary skill in the art would not arrive at Applicants' invention even if in possession of the Schlensker and Stifano references. In the Advisory Action, the Examiner states that Stifano teaches ribs extending from an inner ring (FIG. 6). However, as clearly shown in FIG. 5 and stated on page 2, lines 41-46, FIG. 6 is a sectional side view of a container closed in accordance with the invention, the closure being the embodiment depicted in FIG. 5 taken along line 6-6 thereof, and the bottom closure being the embodiment depicted in FIG. 2 and taken along lines 4-4 thereof. As clearly illustrated in FIGS 2 and 5, there is no inner ring.

As indicated on page 6, second full paragraph, Applicants' claimed back-up ring is reusable, but the lid as well as the filter cartridge must be disposed of later as waste and the costs for the lid material can thus be saved. One of ordinary skill in the art does not learn such a teaching from the combination of Stifano and Schlensker.

### **Arguments Relating to Claim 10**

Claim 10 depends on claim 9 and claims that a bottom contour of the back-up ring, see for example 22, 23 and 24 in FIG. 3, is connected to the back-up ring inner wall and the back-up ring outer lateral wall, and is built such that the bottom contour is complementary to an outer contour of the lid.

As Schlensker lacks the back-up ring, there can be no teaching of the claimed bottom contour. The Examiner points to FIG. 6 of Stifano regarding Appellant's claimed feature. However, FIG. 6 relates to a container closed by a closure assembly. The Stifano lid has no back-up ring illustrated.

### **Arguments Relating to Claim 21**

Although Stifano and Schlensker include a connecting tube, the same do not include separate and distinct back-up rings having an opening through which the connecting tube is accessible.

### **Summary**

For at least the reasons stated hereinabove, it is respectfully submitted that the currently pending rejected claims cannot be anticipated, nor rendered obvious in view of the indicated cited references. It is respectfully submitted that the Examiner has not presented a prima facie case of anticipation nor obviousness.



## **Claims Appendix**

1. (Previously Presented) A filter cartridge with a filter material, comprising: a cartridge container with a bottom wall and a peripheral wall and a lid, which durably shuts the cartridge container, comprised of a lid bottom and a strip-shaped lateral wall having a length measured parallel to the peripheral wall and having a linear vertical cross section along the entire length of the lateral wall, with a form matching according to its border, which is fitted at the inner side of the peripheral wall, wherein the lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section, wherein the curved edge section and the lateral wall join in a common wall section, tapering inwards, in a forming region, wherein a lower end of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, and wherein the lateral wall has an upper wall section which is connected to and extends upward from the common wall section that is parallel to the common wall section lower end and cartridge container peripheral wall adjacent thereto.

2. (Previously Presented) The filter cartridge as claimed in claim 1, wherein in vertical cross section the lateral wall is a linear tangent line, and wherein the lateral wall is connected with the curved edge section tangentially.

3. (Previously Presented) The filter cartridge as claimed in claim 1, wherein the common wall section forms a lower wall section of the lateral wall that includes the lower end.

4. (Previously Presented) The filter cartridge according to claim 1, wherein the curved edge section extends up to the inner end of the strip-shaped lateral wall.

5. (Previously Presented) The filter cartridge according to claim 1, wherein the curved edge section has a mean edge radius of curvature  $R$ , which satisfies  $R \geq 5 \times S$ , wherein  $S$  indicates the thickness of the peripheral wall of the cartridge container.

6. (Previously Presented) The filter cartridge according to claim 1, wherein the curved edge section spans an angle  $\alpha$  from 80° to 100°.

7. (Previously Presented) The filter cartridge according to claim 1, wherein the lateral wall upper wall section extends upward from the common wall section at least up to height of the lid bottom.

8. (Previously Presented) The filter cartridge according to claim 7, wherein the upper wall section of the lateral wall and the curved edge section border on their outer side forming a ring space with a wedge-shaped cross section.

9. (Previously Presented) The filter cartridge according to claim 1, further comprising a back-up ring arranged on the lid, wherein the back-up ring has an inner wall comprising a ring opening, an outer lateral wall in contact with the lid lateral wall, and a plurality of radial reinforcing ribs connected to and extending between the back-up ring inner wall and back-up ring outer lateral wall.

10. (Previously Presented) The filter cartridge according to claim 9, wherein at least a bottom contour of the back-up ring is connected to the back-up ring inner wall and the back-up ring outer lateral wall and is built such that the bottom contour is complementary to an outer contour of the lid.

11-12. (Canceled)

13. (Previously Presented) The filter cartridge according to claim 1, wherein a weld connects at least one section of the common wall section to the peripheral wall.

14. (Previously Presented) The filter cartridge according to the claim 1, wherein glue or a butt weld connects at least one section of the common wall to the peripheral wall.

15. (Previously Presented) The filter cartridge according to claim 1, wherein the material of the cartridge container is transparent to laser light and at least the material of the lateral wall of the lid is absorptive to laser light.

16. (Previously Presented) The filter cartridge as claimed in claim 2, wherein the common wall section forms a lower wall section of the lateral wall that includes the lower end.

17. (Previously Presented) The filter cartridge according to claim 16, wherein the curved edge section has a mean edge radius of curvature  $R$ , which satisfies  $R \geq 5 \times S$ , wherein  $S$  indicates the thickness of the peripheral wall of the cartridge container.

18. (Previously Presented) The filter cartridge according to claim 6, wherein the lateral wall upper wall section extends upward from the common wall section at least up to height of the lid bottom.

19. (Previously Presented) The filter cartridge according to claim 8, further comprising a back-up ring arranged on the lid, wherein the back-up ring has an inner wall comprising a ring opening, an outer lateral wall in contact with the lid lateral wall, and a plurality of radial reinforcing ribs connected to and extending between the back-up ring inner wall and back-up ring outer lateral wall.

20. (Previously Presented) The filter cartridge according to claim 24, wherein a welded area derived from a laser connects at least one section of the common wall section to the peripheral wall.

21. (Previously Presented) The filter cartridge according to claim 9, wherein the lid includes a connecting tube at its center and is accessible through the ring opening of the back-up ring.

22. (Previously Presented) The filter cartridge according to claim 21, wherein the radial reinforcing ribs are connected with each other by a back-up ring bottom extending between the back-up ring inner wall and back-up ring outer lateral wall, and the filter cartridge further comprising a slit-shaped recess between the back-up ring bottom and a portion of the curved edge section bordering on the common wall section.

23. (Previously Presented) A filter cartridge with a filter material, comprising:  
a cartridge container with a bottom wall and a peripheral wall and a lid, which durably shuts the cartridge container, comprised of a lid bottom and a strip-shaped lateral wall having a linear vertical cross section, with a form matching according to its border, which is fitted at the inner side of the peripheral wall, whereby the lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section, whereby the curved edge section and the lateral wall join in a common wall section, tapering inwards, in a forming region, wherein a lower end of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, wherein the lateral wall has an upper wall section which extends upward from the common wall section that is parallel to the common wall section lower end and cartridge container peripheral wall adjacent thereto, a back-up ring arranged on the lid, wherein the back-up ring has an inner wall comprising a ring opening, an outer lateral wall in contact with the lid lateral wall, and a plurality of radial reinforcing ribs extending between the back-up ring inner wall and back-up ring outer lateral wall, wherein at least a bottom contour of the back-up ring is connected to the back-up ring inner wall and the back-up ring outer lateral wall and is built such that the bottom contour is complementary to an outer contour of the lid, wherein the back-up ring does not fill a wedge-shaped ring area between the bottom contour and the lid completely, and wherein the radial reinforcing ribs are connected with each other by a back-up ring bottom contour extending between the back-up ring inner wall and back-up ring outer lateral wall.

24. (Previously Presented) A filter cartridge with a filter material, comprising:  
a cartridge container with a bottom wall and a peripheral wall and a lid, which durably shuts the cartridge container, comprised of a lid bottom and a strip-shaped lateral wall having a linear vertical cross section, with a form matching according to its border, which is fitted at the inner side of the peripheral wall, whereby the lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section, whereby the curved edge section and the lateral wall join in a common wall section, tapering inwards, in a forming region, wherein a lower end of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, and wherein the lateral wall has an upper wall section which extends upward from the common wall section that is parallel to the common wall section lower end and cartridge container peripheral wall adjacent thereto, a back-up ring arranged on the lid, wherein the back-up ring has an inner wall comprising a ring opening, an outer lateral wall in contact with the lid lateral wall, and a plurality of radial reinforcing ribs connected to and extending between the back-up ring inner wall and back-up ring outer lateral wall, and a slit-shaped recess between the back-up ring and a position of the curved edge section bordering on the common wall section.

25. (Previously Presented) A filter cartridge with a filter material, comprising:  
a cartridge container with a bottom wall and a peripheral wall and a lid, which durably shuts the cartridge container, comprised of a lid bottom and a strip-shaped lateral wall having a length measured parallel to the peripheral wall and having a linear vertical cross section along the entire length of the lateral wall, with a form matching according to its border, which is fitted at the inner side of the peripheral wall, wherein the lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section, wherein the curved edge section and the lateral wall join in a common wall section, tapering inwards, in a forming region, wherein a lower end of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, wherein the lateral wall has an upper wall section which is connected to and extends upward from the common wall section that is parallel to the common wall section lower end and cartridge container peripheral wall adjacent thereto, wherein in

- the vertical cross-section, the lateral wall is a linear tangent line, and wherein the lateral wall is connected with the curved edge section tangentially.

26. (Previously Presented) A filter cartridge with a filter material, comprising:  
a cartridge container with a bottom wall and a peripheral wall and a lid, which durably shuts the cartridge container, comprised of a lid bottom and a strip-shaped lateral wall having a length measured parallel to the peripheral wall and having a linear vertical cross section along the entire length of the lateral wall, with a form matching according to its border, which is fitted at the inner side of the peripheral wall, wherein the lid bottom merges with the lateral wall in the direction of the peripheral wall along an inward curved edge section, wherein the curved edge section and the lateral wall join in a common wall section, tapering inwards, in a forming region, wherein a lower end of the common wall section is parallel to the cartridge container peripheral wall adjacent thereto, and wherein the lateral wall has an upper wall section which is connected to and extends upward from the common wall section that is parallel to the common wall section lower end and cartridge container peripheral wall adjacent thereto, and wherein the curved edge section has a mean edge radius of curvature  $R$ , which satisfies  $R \geq 5 \times S$ , wherein  $S$  indicates the thickness of the peripheral wall of the cartridge container.

**Evidence Appendix**

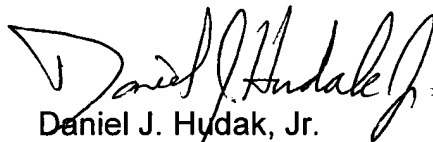
A copy of Exhibits A and B are attached to the Appeal Brief. Exhibits A and B were included in Appellant's Amendment "E" entered November 19, 2007. The Examiner's Office Action mailed January 23, 2008 indicated the status as being responsive to the communications filed November 19, 2007 and page 2 of the Detailed Action indicated that the additionally filed claims were entered.

**Related Proceedings Appendix**

Not Applicable.

Respectfully submitted

HUDAK, SHUNK & FARINE CO. LPA



Daniel J. Hudak, Jr.  
Registration No. 47,669

DJHjr/js

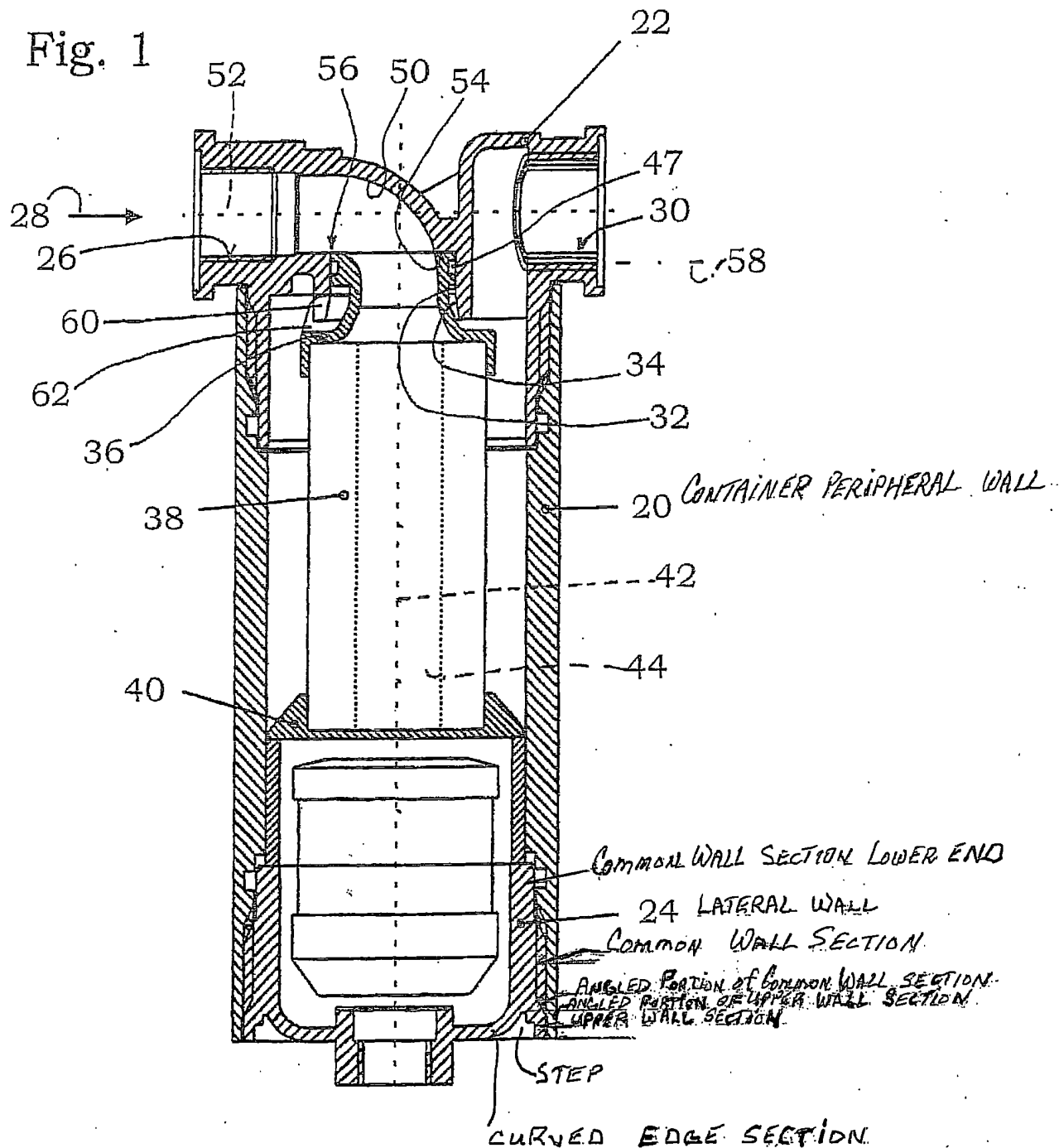
2020 Front St., Suite 307  
Cuyahoga Falls, OH 44221  
330-535-2220

Attorney Docket No.: FMW-CQ-PCT-US

1/4

EXHIBIT "A"

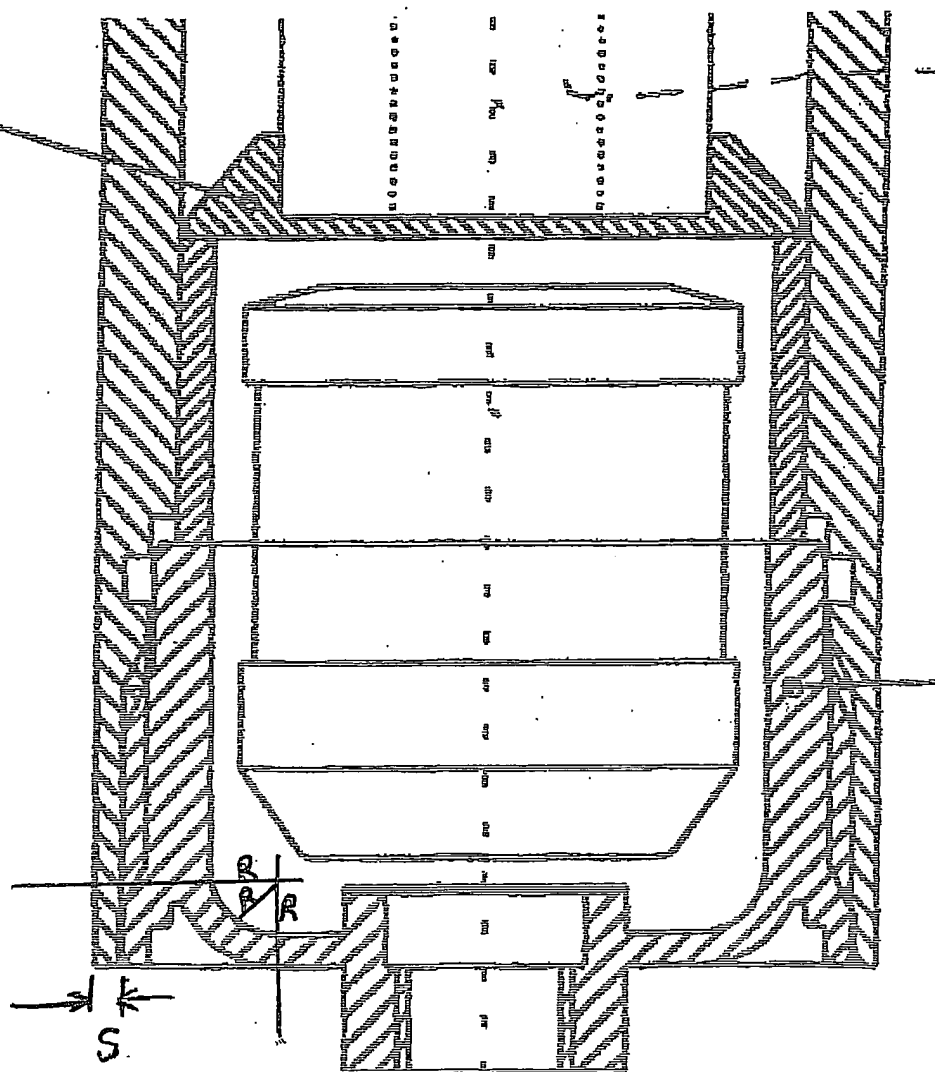
Fig. 1





40

EXHIBIT "B"



$$R = .75 \text{ cm}$$

$$S = .45 \text{ cm at a minimum}$$

$$R \geq 5 \times S$$

$$.75 \geq 2.25 !$$



THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Ernst Reder et al.

Examiner: Benjamin M. Kurtz

Serial No.: 10/520,733

Group Art Unit: 1723

Filed: 01/10/2005

Date: June 10, 2008

For: "FILTER CARTRIDGE"

**Mail Stop – Appeal Brief-Patents**

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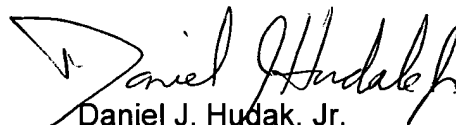
Sir,

The undersigned hereby certifies that the attached **TRANSMITTAL FORM, CHECK NO. 18160 FOR \$510.00, BRIEF FOR APPELLANT AND EXHIBITS "A" & "B"** were mailed to Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA, with sufficient first-class postage, no special handling, on June 10, 2008, before 5:00 PM, thereby ensuring that such documents will be in the hands of the U.S. Postal Service by the close of business this day.

The Commissioner is hereby authorized to charge any additional fees which might be required or credit any overpayment of fees with regard to the attached documents to Deposit Account No. 08-3150.

Respectfully submitted,

**HUDAK, SHUNK & FARINE CO. LPA**



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Attorney Docket No.: FMW-CQ-PCT-US

Enclosures: Return Postcard  
Certificate of Mailing  
Transmittal Form  
Check No. 18160 for \$510.00  
Brief for Appellant (30 pgs.)  
Exhibits "A" & "B" (2 pgs.)